REMARKS

The Examiner has required corrected drawings. A complete set of formal drawings is included herewith.

The Examiner has objected to capitalization of some terms in the claims and the claims have been amended in accord with the Examiner's requirements.

Claims 1-55 are pending in the application. Claims 1, 16, 27, 42, 53, and 55 are independent.

Claims 27-55 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner has required that the preamble of these claims be amended to substitute the word "system" for the word "apparatus". The claims have been amended accordingly.

Claims 1-3, 6-8, 10-19, 21-29, 32-34, 36-45, and 47-55 stand rejected under 35 U.S.C. §103(a) as obvious over Saint Etiennne et al. in view of Unitt et al. The Examiner believes that Saint Etiennne et al. teach all of claim 1 but for "monitoring each buffer for fullness" and "transmitting a Pause control frame from the second MAC client to the first MAC client, the Pause control frame indicating the fullness condition of each buffer." The Examiner maintains that Unitt et al. suggests these steps.

Without conceding any of the points made by the Examiner, the Applicant believes that this rejection can be addressed efficiently by focusing on the alleged teaching of Unitt et al. The Examiner states that ¶58 of Unitt et al. teaches sending a Pause control frame indicating the **level of congestion in the queue**[1]. [Emphasis added.] It is true that Unitt et al. teaches transmitting a Pause control frame, but it is not true that the pause control frame indicates the level of congestion in a queue. Paragraph 58 of Unitt et al. is reproduced below:

> "Gigabit Ethernet includes a flow control facility, intended to restrict the amount of traffic being sent to a node when the node is not in a position to process the incoming information. When this situation arises, a node sends to its peer a `Pause control frame`. Control frames take priority over queued data frames and the pause control frame is transmitted as soon as any current data frame transmission has finished. The pause control frame contains a data value representing a time interval. On receipt, the peer node completes transmission of any current frame but then waits for the specified time interval before restarting transmissions. The header of the pause control frame carries an address field and a type indicator field which identify to the peer the frame type. The operation of this flow control system is detailed in IEEE standard 802.3." [Emphasis added.]

First, Unitt et al. never mentions queue congestion. Second, there are many reasons for sending pause control frames which have nothing to do with queue congestion, e.g. bandwidth allocation among different classes of traffic, fair allocation among traffic in the same class. Due to the bursty nature of Ethernet, one node may attempt to dominate the network. When this happens that node may be sent a Pause control frame to more fairly allocate bandwidth. Third and most significantly, Unitt et al.

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[1] Even if the Examiner were correct, such a teaching would still not meet the claim limitation of "the PAUSE control frame indicating the fullness condition of **each** buffer." [Emphasis added.]

is concerned with a network having many nodes, each of which is associated with a Pause control frame concerning only that node. The present invention is concerned with a "link" having only two nodes. However, according to the invention many different data streams are multiplexed over the same link. Those data streams come from non-Ethernet sources and are destined for non-Ethernet sinks. As succinctly stated in the summary of the invention on page 4 of the instant specification: "methods for providing flow control according to the invention include receiving multiple data streams over a single ETHERNET link, associating a buffer with each data stream, putting received data into the appropriate buffer, monitoring the fullness of the buffers, and transmitting a PAUSE frame to the source of the data streams, the PAUSE frame indicating the fullness of each buffer." The modified pause frame is shown in Fig. 7 and an alternate embodiment in Fig. 9. The frame shown in Fig. 7 includes 336 bits corresponding to 336 virtual ports. See page 14 of the instant specification. Thus, the Examiner should appreciate the claim language which states "the fullness condition of **each** buffer", e.g. 336 buffers. Therefore, even if Unitt et al. taught what the Examiner says it does, it would not teach or suggest what is claimed in each of the independent claims, i.e. "the PAUSE control frame indicating the fullness condition of **each** buffer." [Emphasis added.]

In view of the foregoing, it is not necessary to address the remainder of the Examiner's rejection, nor is it necessary to address the dependent claims.

In light of all of the above, it is submitted that the claims are in order for allowance, and prompt allowance is earnestly requested. Should any issues remain

outstanding, the Examiner is invited to call the undersigned attorney of record so that the case may proceed expeditiously to allowance.

Respectfully submitted,

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